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ABSTRACT

Suggested are concepts and ideas for organizing for institutional research so that it might become a legitimate and separate entity within higher education administration. The following three-way categorization of institutional research is advocated: institutional studies; management analyses; and periodic management reporting. The role of the institutional research office as it relates to institutional studies, management analysis, management information, policy development and implementation, office and institutional operations, and function by subject area is defined. Four organizational models for institutional research are presented (the bureaucratic structure, the systems structure, the collegial structure, and the political structure). The internal institutional research office organization is discussed, and an organizational prototype which serves to demonstrate how the considerations which have been discussed can be used to form a real structure is described. (BD)

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ORGANIZING FOR INSTITUTIONAL RESEARCH

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The long-term organizational success of an institutional research office may be determined by the way in which the institutional research function is structured to be interdependent with the people and offices it serves. A wise understanding of a proper role and well-developed relationships motivate the growth of an increasingly valuable service.

A universally accepted model for the role and structure of institutional research has not emerged from the institutional research literature. Without such a model and without a unitary tradition, the organizer of the institutional research function must be perceptive, creative, responsive, and thoughtful.

Consequently, this description of "organizing for institutional research" calls forth helpful concepts and constructive ideas which may be of use in advancing the integrity of institutional research as a legitimate and separate entity within higher education administration.

The Function of Institutional Research

The origins of institutional research are found in college and university self-study. The resulting name, institutional research, is firmly established even though it does not communicate, by itself, the current and more comprehensive function served by the profession. While any explanation of function will find both supporters and detractors, the following guidelines have proven helpful. First, institutional research provides executive-level management information appropriate to local decision makers and similar information to outside agencies. Second, while the subject of research may be limited by resources or by local guidelines, there is no definitional restriction. Subject priorities may exist, but any aspect of the institution is considered to be appropriate for study. Third, not all executive management information is provided through institutional research. The *methods* used by institutional research help to distinguish institutional research information from information from other sources, including the public media, external reports, conferences with other staff, operational reports from which the decision maker abstracts management information, opinions of influential faculty and staff, and the outcomes of institutional decision making.

Institutional research falls into relatively formal categories. One three-way categorization of institutional research has proven useful and is advocated here: institutional studies, management analyses, and periodic management information reporting.

Institutional studies. Institutional studies are the direct continuation of the original self-study concept. They answer particular, and usually discrete, questions about the institution, its activities, its programs, its public or other services. A successful institutional study gives definitive support for a decision or group of decisions. The report of an institutional study can appropriately be a report presented to a relatively wide audience. The subject can be narrow and specific, pertaining to a small operational problem, or it can be more theoretical and broad based, even appropriately called educational research.

Management analyses. Management analyses are a formalization of the staff support function undertaken by many institutional professionals. They differ from institutional studies, fundamentally, in that the reports put managerial problems into a conceptual perspective with options developed for action or resolution. The costs and benefits of each option are determined, but no recommendations are given. In contrast, the result of an institutional study is *the answer*. Many institutional studies may be more useful to the recipient and professionally rewarding to the researcher if they are cast in the form of management analyses.

Periodic management information reporting. The several operational offices of a college or university control their operations with the aid of reports of operational data derived from a relatively restricted data base. Broader management concerns are served by compiled data based on the totality of the several operational data bases. It is the latter, when produced on a scheduled basis, which is referred to here as periodic management information.

Many consider the aggregation and synthesis of routing data into management information as inappropriate for institutional research. There are reasons to believe otherwise. First, the design of reports useful to executive decision makers requires the kinds of experience and ability needed for other institutional research tasks. Directors of operations offices seldom have the same experiences, interests, or time to design or produce such reports.

Second, other products of institutional research must be integrated into the regular reporting of management information to the executive management level in order to provide a coordinated package with an institution-wide focus.

Third, management information can be packaged into a report series, thus providing for continuity within subject areas and over time—both essential characteristics of effective management reporting.

Fourth, the centralization of management information reporting within the institutional research function helps to make that information available immediately for reporting to outside agencies or central administrative units of university systems.

Finally, day-by-day involvement in periodic information reporting legitimizes the institutional researcher's requests for changes in the operational data system necessary for management reporting.

The provision of executive management information through the three categories fills a distinct role within the institution. That role is implied in Figure 1. In that diagram, the several operations functions, including the associated administrative and governance functions, are on the right; the data/information support functions which constitute a feedback loop are in the center; and the data interface to outside agencies is to the left.

The functional structure (or organization) illustrated in the diagram is one facet of structure which must be considered while organizing for institutional research. There are three major factors to consider when organizing for institutional re-

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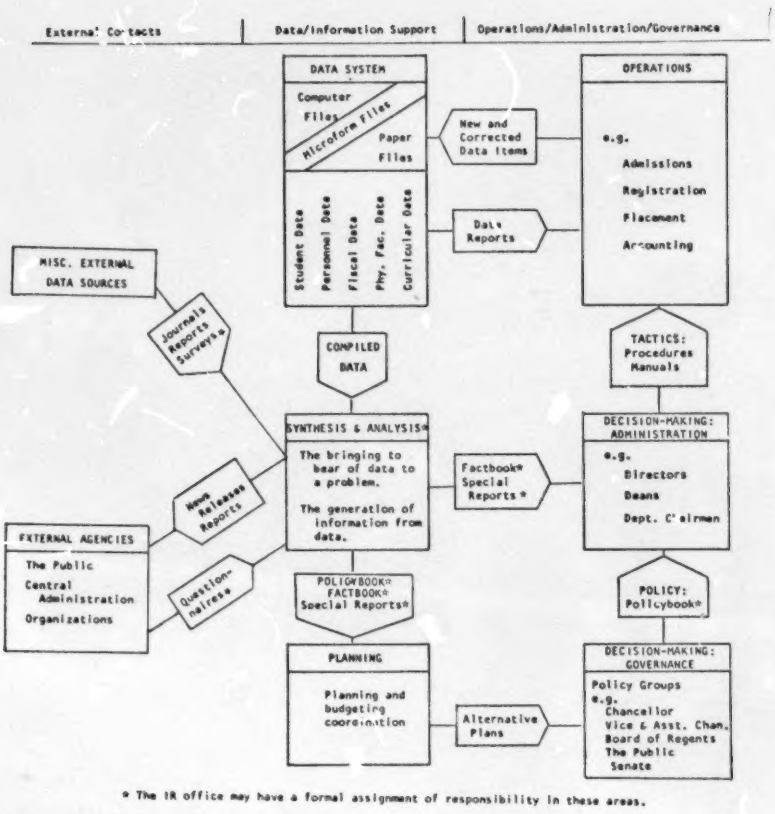

* The IR office may have a formal assignment of responsibility in these areas.

Figure 1. The provision of executive management information.

search: the role of the office, the structural relationship of the office to other offices, and the structure within the office.

The Role of the Institutional Research Office

The institutional research function is of broad concern within an institution. The determination to centralize the function within an office of institutional research is based on a balancing of the potential effectiveness of operation gained by interested users as a result of centralization as opposed to each user doing its own institutional research. These benefits of centralization can be substantial in terms of efficient use of staff and the professional coordination of projects as well as the clear identification of expenditures associated with institutional research. If properly charged, an institutional research office can provide an objective and comprehensive information base for planning and decision making. It can provide a consistent, continuing flow of management information resulting from its institutional studies. Having a dedicated professional directing a basic function rather than having dispersed services from staff not as experienced, and perhaps serving on a time-available basis, provides a support service not possible with a decentralized function.

As the desirability of centralized institutional research functions leads to the establishment of an office, many questions and factors must be considered before the specific role of the particular office is clearly defined. The first three are research categories, the fourth relates to policy formulation, the fifth to institutional research office operations, and the sixth represents major areas of study.

Institutional studies. Will the office be responsible for the conduct of ad hoc studies? Are those studies expected to be scholarly and of interest outside of the university? Are they to be management oriented or directed to the academic processes? Are student follow-up studies to be undertaken, and if so, are they to be part of an integrated pattern of alumni contact or are they to be individually designed to answer specific questions? Should the institutional research office be responsible for the execution of commercially available study instruments? What other institutional studies are expected? Is the office to determine its own priorities for studies? Will studies by other offices, departments, or individuals be coordinated by the office?

Management analyses. Will the office be responsible for the conduct of management analyses? If so, several of the questions pertaining to institutional studies apply here also. Should the office be considered only as a resource for analyses undertaken by administrators? Should these analyses report only those alternatives proposed by those requesting the analysis or should they be creative according to the talents of the researcher?

Management information. Will the office be responsible for the regular dissemination of institutional information? Will questionnaires directed to the institution be coordinated or responded to by the institutional research office? Will a factbook be generated? Will the office maintain a library of institutional data? Should there be a codification of policies and the development of a policy book? Should the office be available to assist faculty, outside agencies, students, or others to acquire institutional information? Should the office be responsible for documenting program approvals, accreditation actions, and other official acts? Should the results of institutional studies and management analyses be disseminated to those

other than the original requester? Should the offices be responsible for faculty or student handbooks?

Policy development and implementation. The office may be used for other than strictly institutional research functions. The institution may wish to have assistance in developing and/or implementing a procedure or policy. Should any assigned development and implementation responsibilities be undertaken as background assistance to a particular office, or should they be in the name of the institutional research office?

Office and institutional operations. An established institutional research office cannot avoid some operational responsibilities. Responsibilities for an internal budget, staffing problems, and other "housekeeping" matters are inevitable and must be planned for as legitimate assignments for the office. Institutional operations may be more subject to choice. Should any institutional operations be assigned to the institutional research office? Should the office maintain any data files? Should institutional research personnel sit on any decision-making bodies? Should they have authorization to approve or reject data coding changes or other operating system change proposals to protect the usefulness of data for managment reporting? Should ongoing operational reporting of any kind go through the office? Should operational data to outside agencies or the governing board go through the office? What is its role in collective bargaining in addition to supplying data?

Function by subject area. Ultimately, most questions of office role could be considered in one of five suggested categories because institutional research has functions which are different from other offices of the organization. It may be convenient and meaningful to define the role of a particular office further by specifying certain subjects which have major institutional importance and which need an integrated or holistic approach using the appropriate institutional research tools. During the dramatic growth period of higher education, analysis of physical facilities provided such a focus for many offices. At present, the activities of institutional planning and budgeting, program and personnel evaluation, or collective bargaining may serve as subject areas around which the institutional research office role may be centered for a particular institution. The emphasis on a particular area for study changes as the challenges for an institution change.

Organizational Models for Institutional Research

Organizing for institutional research is begun by specifying the role of the office. That effort, in effect, establishes the statement of need for the office. The organizer must then turn to planning for relationships among the office personnel, the data sources, the administrative support services, and the users of its services.

In this light, an institutional research office cannot simply be inserted into the institution; rather, the institution *and* the office must be structured, together, for the institutional research function. The placement of the office and its relationships with other offices are discussed in respect to four structural types: bureaucratic, system, collegial, and political.

The bureaucratic structure. A bureaucratic structure of hierarchical relationships is the mechanism through which formal sanctions operate. Formal institutional decisions are finalized (but not necessarily formulated) and accountability is demanded through the bureaucracy. Many relationships are not bureaucratic: the flow of data and reports, work with faculty groups, and ad hoc groupings for policy actions do not generally follow bureaucratic lines. It follows that while almost any bureaucratic location of the institutional research office will facilitate purely bureaucratic functions, the indirect impact that such placement will have on the other functions of the office must be considered.

Suggested questions to consider are these: Is the prestige of the bureaucratic position sufficient to allow the incumbent to establish necessary collegial relationships, system relationships, and a political base? Is the authority in the position sufficient to allow decision making necessary for the assigned functions? Is the level *high* enough to allow the employment of appropriate personnel, to compensate them appropriately, and to provide other necessary resources? Can office space be assigned which facilitates the institutional research functions? Most important, is the bureaucratic placement commensurate with the necessarily broad scope of concern of an institutional research office?

The systems structure. The "systems structure" organization perceives the function of institutional research in terms of a systems approach. The institutional research function is to relate to data producers, to process data into information, and to report to the information users. To structure an office in these terms is to establish communication channels to appropriate providers and users of data and information regardless of the relative bureaucratic placements.

The major considerations follow: Does the office have direct access to the data produced by each operations office (e.g., registrar, controller, or financial aid) or does the office petition the operations director for needed data? Are the differences between "date-of-record" or "official reporting" data and continuously updated current operational data understood and the differences in relationships appreciated by the operations director to whom the institutional research office relates?

Are the computing services (hardware operations) totally separate from the office? Is there a mechanism for the office to have input into hardware acquisition decisions?

Is there an appreciation of the difference between *computer systems*—the design and operation of the computerized aspects of information systems—and the entire institutional *information system* which includes the flow and format of data and information among all offices whether or not the computer is used? How does the office participate in the design of the information system? Is it an operation assigned to the office? Does it provide analysis support to information system changes?

Finally, how will the office relate to the users? Will it transmit information directly to the user? Will some or all of the output be transmitted for review through an appropriate operational section of another administrative office? Will the institutional research office act as a data liaison directly to outside agencies or to any central board staff?

The collegial structure. A collegium is a structure serving a particular interest of higher education. The structure consists of persons who are peers in regard to actions being undertaken. As members of the collegium, they share appropriate values or goals or status in relation to a pending decision. Providing for a collegial structure for an institutional research office through tradition or the granting of faculty rank may be appropriate for two reasons. First, the professional institutional research staff may be able, by experience or education, to add to the faculty governance function as peers. Second, the institutional research function may benefit from the collegial interaction and resultant credibility, especially for managerial analysis activities. Those projects often need the creative product of group interaction for the establishment of new alternatives and for the critical evaluation of costs and benefits.

Appropriate questions may be these: Should there be an advisory committee for the institutional research office or should direction be set solely from within the bureaucratic (or political) structure? Should voluntary recruitment of faculty from departments for particular projects be encouraged, realizing that, as a consequence, the group will be setting the study

goals outside the bureaucratic structure? Should the office be represented on faculty governance and/or academic or administrative committees? Most important, can the relationships between the staff and upper level management be established to facilitate peer interaction when desirable regardless of the relative bureaucratic locations?

The political structure. A political structure of the organization's members within a power of influence net is a model which must be recognized in the understanding of colleges and universities. Experience supports the idea of a political structure which superimposes itself on all other structures. Consequently, its use as an analytical tool cannot be overlooked. An awareness of its reality and of its probable impact can be of valuable assistance while considering the other structures.

Inasmuch as a political structure usually is not *planned* and may consist of transient alliances, its existence is not thoroughly studied nor always acknowledged. Thus, admonitions to the organizer of an institutional research office are hard to develop. If being at a high level within the political structure is deemed important, some kinds of actions may promote that placement. Those actions can be facilitated by giving attention to the following questions: Have power centers relevant to the more frequent concerns of the office been identified? Have those centers been cultivated to support the institutional research process? Has support for innovations been sought from within the political structure? Can the informal support system be expanded to include the institutional research personnel? Can a superordinate actively assist in introducing the institutional research personnel into that system? Can the technical competence of the office be used to enhance its power? Can the institutional research incumbent "keep cool" when faced with negative reactions from the political structure even when supported by the bureaucratic structure, recognizing the sources and reasons for the reaction and working rationally in response? Finally, is the personality of the incumbent appropriate for the extant political structure?

Internal Institutional Research Office Organization

Structure within the office has two aspects. First, if the office is large enough to support more than one professional, the activities of the office must be appropriately assigned. Second, the flow of work of the office must be structured for control and efficient management.

If the office is large enough to allow specialization, the assignment of responsibility can match the available talents and personalities with each of the functions of the office: The person charged with the management information function has been referred to as "superclerk," one who can manage quantities of data but who also has knowledge of the needs of data users, of computer data processing, and of information system design. The person charged with institutional studies can be oriented to research and will more likely make good use of advanced graduate experience which stressed research methods in a relevant field. The management analyst needs greater political finesse, perceptiveness, and organizational understanding. This person must be able to undertake applied research and to effectively solicit opinions and ideas from the institution's staff. This person must also be able to write a final report which will encourage its use by the appropriate decision maker. The person charged with the ad hoc development and implementation function must be comfortable in the collegial role, that of working with peers to institute new procedures from a position outside the bureaucratic authority channels.

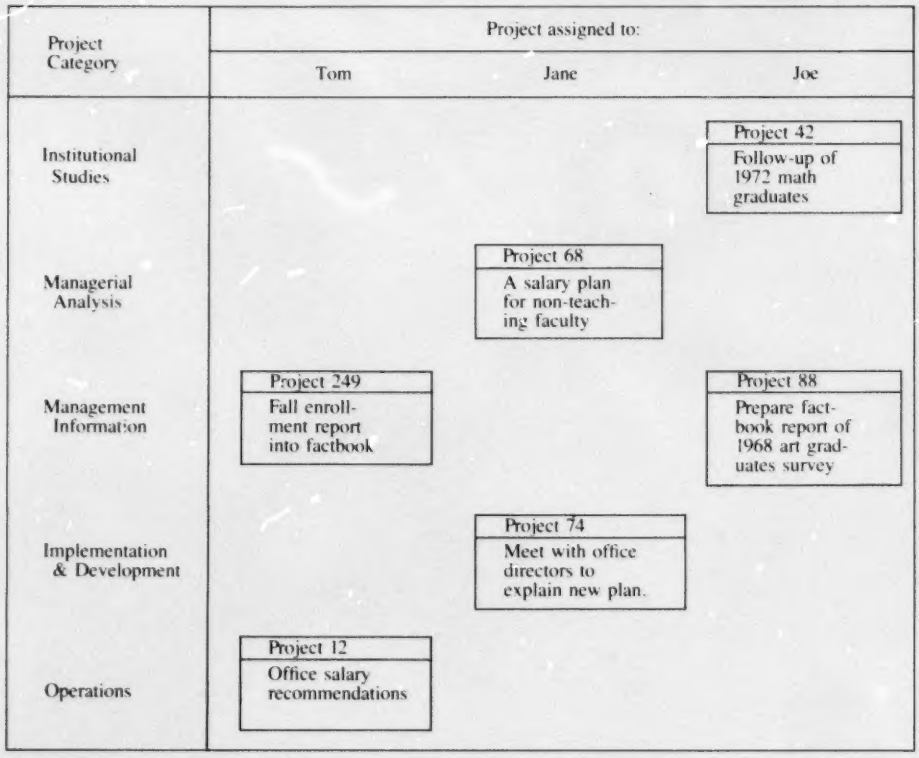

Figure 2. Sample control board.

That person's authority will be based primarily on technical and interpersonal competence. Finally, the person charged with the office and assigned institutional operations must be capable of a bureaucratic orientation, providing direction for support staff and bureaucratic actions relating to budget and personnel matters.

The structuring of the office work flow is accomplished not so much through principle as it is through the use of carefully designed control forms and procedures manuals. Such detail is not appropriate here. However, the division of all office activities into discrete projects, separately coded or named, facilitates control, communication, and accountability reporting.

When projects become numerous and their relationship complex, a control board can be useful. This can be a simple device, even a chalkboard, upon which to record assignments. Figure 2 illustrates a form such a control board might take.

Many other ideas for structuring an office and its activities can be found by visiting well-established offices.

An Organizational Prototype

The assumption that institutional diversity precludes a prescriptive approach to organizing the institutional research office underlies all of the present discussion. This does not mean that just *any* organization is as serviceable as any other; it means only that no one model, which will be effective for all institutions, will emerge from even the most thorough consideration of all the aspects itemized. An organization prototype, therefore, must be limited to some of the general ideas and must be designed to serve as a demonstration to emphasize that some of the many considerations discussed here may be able to be pulled together into a real structure.

Figure 3 outlines a prototypal bureaucratic organization which facilitates a sound systems structure. It provides that some of the functions on the data/information side of the functional structure from Figure 1 be located in distinct offices on appropriate levels and grouped as *information support services* to stress their mutual broad scope of concern throughout the institution.

Other features of this prototype are highlighted. The budgeting and planning coordination is distinct from the business functions, including that of the controller. The built-in system of checks and balances is readily apparent, but equally important is the resulting fusion of budgeting with the overall planning function in a position parallel to institutional research under the information support services category. Also, formal information systems efforts are brought together to provide integrated and comprehensive coordination of records, forms, office data systems, and computer systems. This pulling together of activities related to the information system serves to legitimatize this support function which is often left to chance and tradition. The bureaucratic structure is suggested in Figure 3. An integrated system structure is suggested in Figure 4.

Interesting ramifications of this system structuring may be discovered for individual institutions. Four of its features are elaborated here:

First, the relationship among the functions depicted here, and thus the offices assigned those functions, is based on the communication of data and information. Some of the data elements and some data processing activities may be computerized, but coordination of the computerized system is no more important than that of the manual system. Therefore, the coordination of the entire information system emerges as a major centralized function.

Second, the institutional data systems section of the information systems office has a coordinative, staff-like function which works to integrate the data activities of all offices from the initial faculty hiring or student admission to retirement,

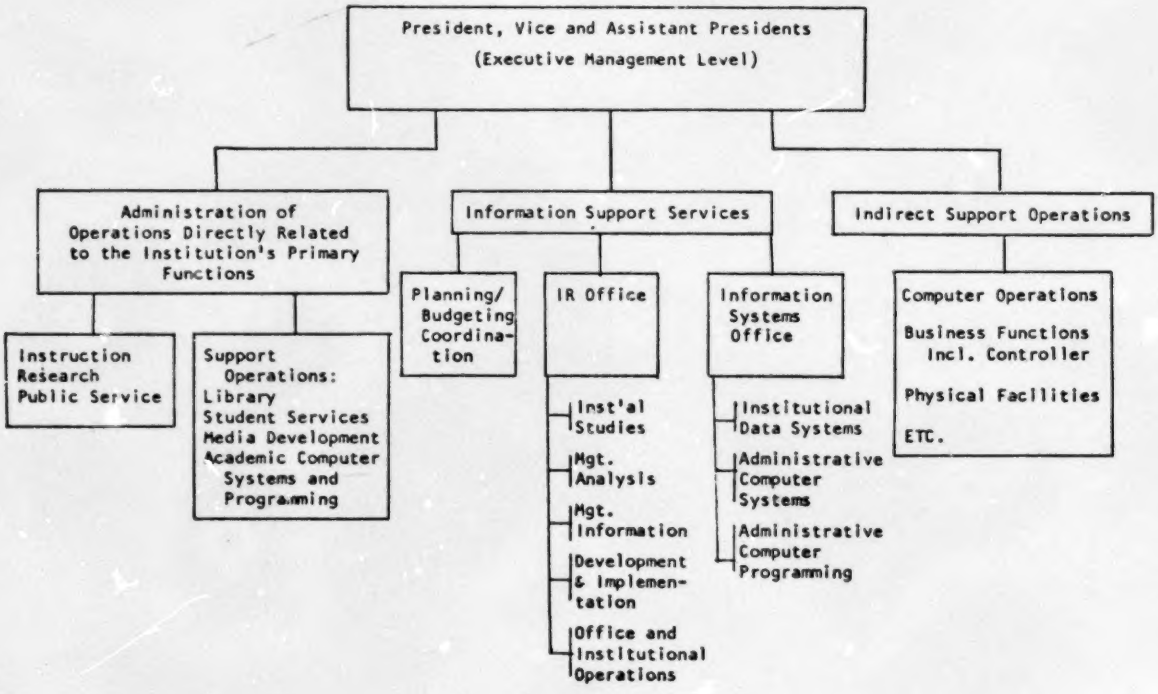

Figure 3. Systems structure—bureaucratic prototype.

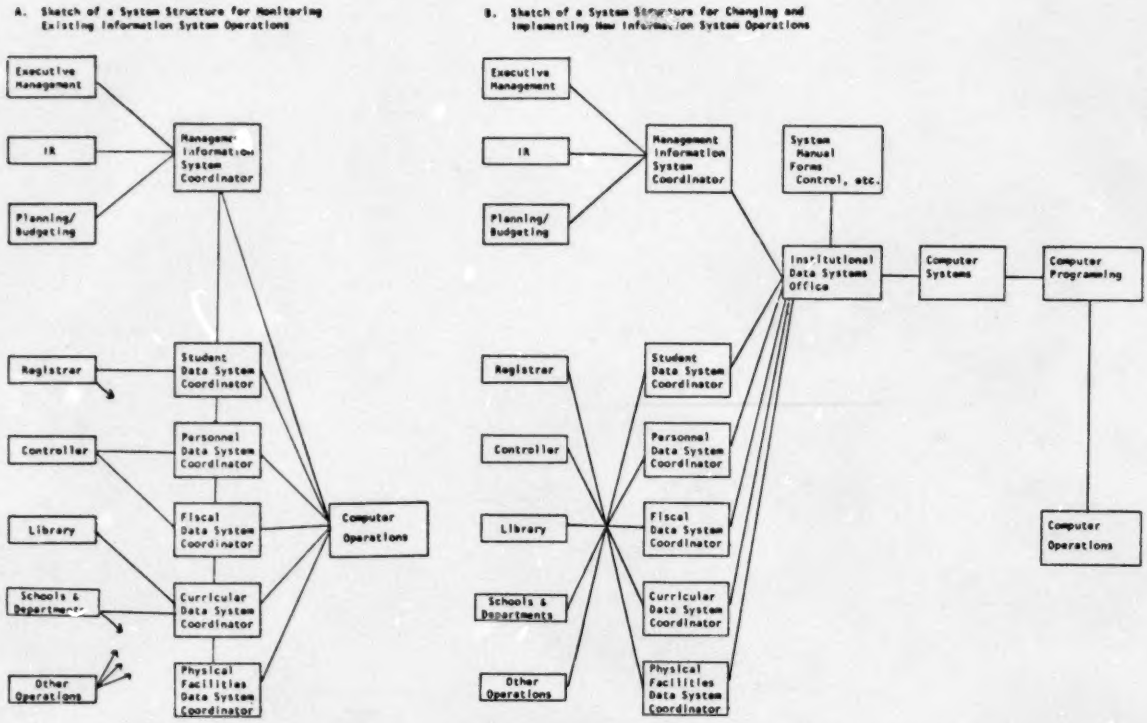
A. Sketch of a System Structure for Monitoring Existing Information System Operations
Executive Management
IR
Planning/ Budgeting
Management Information System Coordinator
Registrar
Student Data System Coordinator
Controller
Personnel Data System Coordinator
Library
Fiscal Data System Coordinator
Schools & Departments
Curricular Data System Coordinator
Other Operations
Physical Facilities Data System Coordinator
Computer Operations
B. Sketch of a System Structure for Changing and Implementing New Information System Operations
Executive Management
IR
Planning/ Budgeting
Management Information System Coordinator
System Manual Forms Control, etc.
Institutional Data Systems Office
Computer Systems
Computer Programming
Registrar
Student Data System Coordinator
Controller
Personnel Data System Coordinator
Library
Fiscal Data System Coordinator
Schools & Departments
Curricular Data System Coordinator
Other Operations
Physical Facilities Data System Coordinator
Computer Operations
*The placement, here, of executive management with only one operations line to IR implies only that the IR office is the designated support office for executive management information. Executive management has many other close contacts with all other offices through the bureaucratic structure, the political structure, or the like. This chart displays the information system relationships only.

Figure 4. An integrated systems structure.

graduation, or audit. The office, however, plays no role in decision making about the primary function of the institution nor does it control the relationships among the offices and functions. Those decisions are made within the bureaucratic structure using, as staff assistants, personnel from the systems office and the institutional research office. The products of the systems section are (a) manuals to guide data operations and (b) requests to the computer systems office to provide appropriate computer systems as support for institutional research.

Third, the data system coordinators are selected from within an appropriate operations office to monitor and control the input, processing, and use of assigned data elements. They are the experts for that area and act as a centralized liaison both for operations and changes between users and the institutional systems office and, when needed, computer services, the operations part of the computerized system. The institutional research office serves as that liaison for executive management users.

Fourth, this structure acknowledges the separate status of a management information system. This implies that operations reports may be limited to the purpose of providing transaction data and other detail to the several operational offices and that management reports can be designed to provide highly aggregated and interrelated data for specific executive management needs. The institutional systems office working with the system coordinators is charged with assuring that each data provider works both to meet the provider's needs and the needs of other users, including the institutional research office.

The institutional research office becomes, in this prototype, the major information link between operations and executive management. In that role, the office assumes very restricted operational responsibilities, dedicating its unique competence to the development and communication of executive management information whether it be derived from ongoing operational data or special institutional studies.

The greater part of the literature pertaining to the role, structure, and techniques of institutional research has grown, in the past, from the experiences within individual institutions and, consequently, has received limited general circulation. That scarcity of relevant literature is quickly changing to a profusion. The new material is often the more helpful. Much of this literature can be found through reference to the several publications of the Association for Institutional Research and the section of *The Chronicle of Higher Education* entitled New Books in Higher Education.

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